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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,192	02/11/2004	John Wesley Gardner	241744US13	1625

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EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT PAPER NUMBER

2837

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/775,192

Applicant(s)

GARDNER ET AL.

Examiner

Jeremy Luks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3-5, 7, 10, 12, 14 and 15 rejected under 35 U.S.C. 102(b) as being anticipated by D'Antonio (5,817,992).

With respect to Claims 1, 3, 5, 7, 10, 12 and 15, D'Antonio teaches a membrane having first and second faces (Col. 6, Line 8-12, 32-34); a first rectilinear substrate disposed on the first face of the membrane (Col. 6, Lines 32-34) and having (i) a plurality of first absorptive regions and (ii) a plurality of first reflective regions formed as wells in a face of the first substrate, the first absorptive regions and the first reflective regions arranged in a pre-defined grid pattern (Col. 1, Line 61-Col. 2, Line 11); and a second rectilinear substrate disposed on the second face of the membrane (Col. 6, Lines 32-34) and having (i) a plurality of second absorptive regions and (ii) a plurality of second reflective regions formed as second wells in a face of the second substrate, the second absorptive regions and the second reflective regions arranged in the pre-defined grid pattern (Col. 1, Line 61-Col. 2, Line 11); wherein the pre-defined grid pattern is arranged in accordance with a random binary sequence where a zero of the binary sequence is represented by a first absorptive region of the plurality of first absorptive regions and a one is represented by a first reflective region of the plurality of first

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reflective regions, and the second substrate is disposed on the second face of the membrane 180 degrees out of phase relative to the first substrate (Col. 1, Line 61-Col. 2, Line 11) (Col. 4, Lines 51-56) (See Figures 14 and 15; Col. 7, Lines 40-61); and wherein each substrate is no greater than two inches thick, made of compressed fiberglass, and the entire structure is covered by a fabric (Col. 5, Lines 36-39).

With respect to Claims 4 and 14, D'Antonio teaches wherein there is an equal distribution of first absorptive regions and first reflective regions in both the vertical and horizontal directions, respectively, of the first substrate (Figure 7) (Col. 2, Lines 3-11) and there is an equal distribution of second absorptive regions and second reflective regions in both the vertical and horizontal directions, respectively, of the second substrate (Figure 7) (Col. 2, Lines 3-11).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over D'Antonio (5,817,992) in view of Reinhardt (4,815,018). D'Antonio is relied upon for the reasons and disclosures set forth above. D'Antonio fails to teach a random binary sequence generated by a Gaussian random number generator. Reinhardt teaches a random binary sequence generated by a Gaussian random number generator (Col. 5,

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Lines 23-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of D'Antonio, with the apparatus of Reinhardt to generate a non-repeating sequence of numbers.

3. Claims 6, 8 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over D'Antonio (5,817,992) in view of Wolf (4,496,024). D'Antonio is relied upon for the reasons and disclosures set forth above. D'Antonio fails to teach a non-porous membrane made of a solid material; wherein the membrane is no greater than 1.7 ounces per square ft. Wolf teaches a non-porous membrane (Figure 1, #20) made of a solid material (Claim 1, Col. 3, Lines 60-61); wherein the membrane is no greater than 1.7 ounces per square ft (Col 2, Lines 34-63). It is inherent that the thermoplastic layer (20) described by Wolf will be no greater than 1.7 ounces per square foot given the type of material it is made of and that it is merely a bonding agent. ). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of D'Antonio, with the apparatus of Wolf to secure the panels together with a long-lasting bonding agent for greater durability over time.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Antonio (5,817,992) in view of D'Antonio (6,112,852). D'Antonio ('992) is relied upon for the reasons and disclosures set forth above. D'Antonio ('992) fails to teach wherein the wells are cylindrical in shape. D'Antonio ('852) teaches wherein the wells are cylindrical in shape (Figure 1B) (Col. 3, Lines 2-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of

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D'Antonio ('992), with the apparatus of D'Antonio ('852) to attain a desired density of the panel.

***Response to Arguments***

5. Applicant's arguments filed 11/13/06 have been fully considered but they are not persuasive. The Examiner still considers the obvious combination of the prior art of record to teach all of the limitations as claimed by Applicant.

6. In response to applicant's argument on Page 3, Paragraph 1; a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

7. Regarding Applicants arguments toward rejected claims 1, 3-5, 7, 10 and 12, 14 and 15. The Examiner considers D'Antonio (5,817,992) to teach all of these limitations. As pointed out by Applicant on Page 4 of the Arguments, D'Antonio's Fifth Embodiment teaches a baffle or membrane having BAD surfaces on both sides (Page 6, Lines 31-34), as well as a BAD panel (Figure 7) and an inverted BAD panel (Figure 8) arranged on an array (Col. 4, Lines 49-56). D'Antonio teaches using the panels in an array to minimize "lobing". This can further be seen in Figures 14 and 15 (Col. 7, Lines 40-61). Normal and inverted panels are arranged on opposite sides of one another, and are separate by a membrane as can be seen in the Figures. Further, Applicant gives no structural limitations as to where the first and second sides of the membrane are located. The only requirement is the substrates are 180 degrees out of phase relative

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to one another. Therefor, panels 180 degrees out of phase with one another may be attached at an edge as seen in Figures 14 and 15.

8. Regarding Applicant's arguments toward rejected Claims 2 and 13, the Examiner notes that these claims were previously, and are currently rejected over D'Antonio (5,817,992) in view of Reinhardt (4,815,018), despite Applicant's traversal on the grounds that the claims were rejected over D'Antonio (5,817,992) only. Please see Office Action above, and Non-Final Rejection dated 7/12/06.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremy Luks  
Patent Examiner  
Art Unit 2837  
Class 181

  
LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER